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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,666	02/05/2002	Takashi Hiroi	501.41125X00	4688

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EXAMINER	
BERMAN, JACK I	

ART UNIT	PAPER NUMBER
2881	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/062,666	HIROI ET AL.	
	Examiner	Art Unit	
	Jack I. Berman	2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3,5,6,10-16 and 20-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3,5,6,10-16 and 20-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3, 5, 6, 12-16, and 25-34 ar rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno (U. S. Patent No. 6,047,083) in view of Worster et al. (U. S. Patent No. 5,963,314). As was explained in previous Office actions, Mizuno discloses a method comprising the steps of: irradiating a charged particle on a surface of a substrate on which a pattern is formed (lines 57-65 in column 3); producing an image of said substrate surface by detecting secondary electrons generated from said substrate as a result of the irradiation (line 66 in column 3 through line 8 in column 4); producing a digital image by subjecting the produced image signal to A/D conversion (lines 37-39 in column 6); comparing the digital image with a reference image and extracting a defect candidate (lines 44-53 in column 3); outputting an actual image of the extracted defect candidate and data comprising the location of the defect candidate, via a storage medium (lines 41-43 in column 6); storing said outputted actual image of the extracted defect candidate and

data comprising the location of the defect candidate (lines 39-41 in column 6) including data enabling the classification of the defect (lines 53-58 in column 6); and displaying on a screen in a map format the defect candidate location data outputted via either said storage medium or network (lines 35-40 in column 4). As Applicant argued in the Appeal Brief filed on April 10, 2007, Mizuno does not teach to display a selected one of the stored actual images of the extracted defect candidates which is designated on the screen among the extracted defect candidate data displayed in said map format on said screen so that the selected one of the stored actual images is displayed together with said map format on said screen. Such a teaching is found in Worster et al. at line 29 in column 13 through line 44 in column 14 and illustrated in FIG. 4, which discloses a display method for another type of wafer method (using a scanning laser rather than a scanning electron beam) that displays a defect image and a wafer map on the same screen so that an operator can select a stored image of a defect to display by using, for example, a mouse to "point" and "click" on a defect indicated on the wafer map. Since Mizuno teaches, at lines 6-10 in column 7, that stored information can be displayed according to need and that, as is discussed above, both the actual images of defects and a wafer map are stored in a memory, it would have been obvious to a person having ordinary skill in the art to display a selected one of the stored actual images of the extracted defect candidates which is designated on the screen among the extracted defect candidate data displayed in said map format on said screen so that the selected one of the stored actual images is displayed together with said map format on said screen in the manner taught by Worster et al. in order to make use of the point and click system control method disclosed by Worster et al.

Claims 10, 11, and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno and Worster et al. as applied to claims 3, 5, 6, 12-16, and 25-34 above, and further in view of Gallarda et al. (U. S. Patent No. 6,539,106). As was explained in previous Office actions, Gallarda et al discloses the steps of changing threshold value data for detecting defect candidate of said pattern on said screen and displaying on said screen utilizing said changing threshold (i.e. updating the display in accordance with the changing threshold) (column 8, lines 59-60; column 12, lines 37-42), defect candidate matching (column 13, line 56-column 14, line 19), displaying designated classified defect candidate locations in map format on the screen (column 16, lines 60-63), and producing a list or table from among said classified defect candidates so that they are displayed on said screen discriminately from each other in the map format (column 14, lines 58-62).

Applicant's arguments filed November 30, 2007 have been fully considered but they are not persuasive. Applicant argues that "Worster et al does not overcome the recognized deficiencies of Mizuno in the sense of 35 USC 103, and the Examiner has again engaged in an illegitimate 'obvious to try' test of patentability." Contrary to applicant's assertion that such a test is "illegitimate", the United States Supreme Court recently held, in *KSR International Co. v. Teleflex Inc.,* 82 USPQ2d 1385 (2007):

> Fact that claimed combination of elements was "obvious to try" might show that such combination was obvious under 35 U.S.C. §103, since, if there is design need or market pressure to solve problem, and there are finite number of identified, predictable solutions, person of ordinary skill in art has good reason to pursue known options within his or her technical grasp, and if this leads to anticipated success, it is likely product of ordinary skill and common sense, not innovation.

In the instant case, Mizuno teaches, as is discussed above, to store and display both actual images of defect candidates and wafer maps indicating the locations of the defect candidates, but

does not suggest displaying the images and the wafer maps together. Worster et al. discloses a similar inspection apparatus and teaches that it is advantageous to display images of defects and wafer maps together on the same screen in order to assist in locating the defects. Since both Mizuno and Worster et al. are directed to inspection apparatus, it would have been obvious to a person having ordinary skill in the art to apply the teachings of Worster et al. to Mizuno by displaying the actual images and wafer maps stored by Mizuno on the same screen in the manner taught by Worster et al. in order to realize the control advantages discussed by Worster et al.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant's discussion of differences between the Worster et al. inspection system and that claimed in the instant application is not relevant because the rejection is not based on Worster et al. alone, but on Mizuno in view of Worster et al.

In response to applicant's argument based upon the age of the references, contentions that the reference patents are old are not impressive absent a showing that the art tried and failed to solve the same problem notwithstanding its presumed knowledge of the references. See *In re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack I. Berman whose telephone number is (571) 272-2468. The examiner can normally be reached on Monday-Thursday (8:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jack I. Berman/
Primary Examiner, Art Unit 2881

jb
2/18/08